

NEW SYRPHIDÆ (DIPTERA) FROM MISSISSIPPI.

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Mississippi is in a region that is as yet almost wholly unexamined in regard to its dipterous fauna. The discovery of two very interesting new species of Syrphidæ from the trifling number that have thus far been collected in the state argues a rich return from collecting in the future. The writer wishes to express his appreciation to Mr. C. H. Curran, who has kindly verified his determinations, particularly of the *Microdon*.

***Microdon* (*Omegasyrphus*) *painteri*, new species.**

Male: Face and front dark shining metallic bronze, of medium width and nearly parallel. Oral margin and cheeks shining black. Cheeks and posterior orbits white pilose. Pile of face and lower half of front white, on upper half of front and vertex brownish yellow. Marking the anterior third of front is a shallow grooved depression somewhat in the shape of a "Y" the upper arms of which are wide apart and reach to the eyes. Face projecting for about half of its width, beginning just below the eyes. Eyes bare. First joint of antennæ reddish, darker at tip; second and third joints black. Third joint distinctly shorter than first and second combined, pointed at tip and approximately twice as long as broad. First and third joints about equal in length; second joint short. Arista scarcely as long as last joint, reddish orange, brownish and considerably thickened at base.

Dorsum of thorax feebly shining bluish black; with five shining, purplish bronze stripes of which the middle one is very narrow and the lateral ones quite wide; these stripes merge into a similarly colored area both on the anterior end of the dorsum and just before the scutellum. Scutellum shining metallic; spines small and separated by a distance slightly greater than their length. Pleuræ and humeri strongly purplish bronze. Pile of dorsum short and of a yellowish cast, that of pleuræ longer and white. Squamæ pale yellowish.

Abdomen: First segment dull brownish black, but little shining. Second widened and considerably depressed so that the lateral margins have a much thickened and rounded appearance on the edges; a large indistinct triangle of dark golden brown which in some lights has a greenish reflection, its apex reaching the posterior margin, has its base along the anterior margin. The remainder of this segment and the rest of the abdomen light, slightly brownish red becoming a little darker on the fourth segment. Whole abdomen faintly shining; pile

or pubescence short, white, longer on the lateral margins and more noticeable on the third and fourth segments. Venter concolorous with the dorsum with the exception of the first segment which is blackish.

Femora black, shining, with very short and sparsely white pile; apex of femora and trochanters reddish. Tibiæ reddish, piceous at their outer ends, covered with short abundant white pile; first joint of hind tarsus considerably enlarged. Wings hyaline with a dark brownish cloud in the middle on the anterior half of wing, smaller clouded areas following the veins closing first and second posterior cells and about the marginal and submarginal cells. Veins brown; stigma luteous. A stub of a vein extrudes half way across the first posterior cell at its middle.

Female: Very similar to the male. All three joints of the antennæ light yellowish brown, outer half of last joint grayish or blackish. Arista entirely reddish yellow. Front noticeably wider. The ground color of thorax appears more metallic and greenish. Scutellum more purplish bronze. The second segment lacks the brown triangle and is entirely reddish.

Femora dark shining red. Tibiæ and tarsi light brownish red; pile of the former white, of the latter brownish yellow. Infuscated spots and veins of the wing smaller in extent. Ocelli bright shining red.

Length: 10 mm.

Holotype male and two paratype males taken in a cypress swamp on September 18, 1920, at Greenville, Miss., (F. M. Hull). Allotype female from College Station, Texas, September 28, 1920, (H. J. Reinhard).

Holotype and paratype in the collection of the author. Allotype in the collection of Mr. Reinhard.

It gives me pleasure to name this species in honor of Mr. R. H. Painter who has been active in the collection of the *Syrphid* fauna of the region.

***Somula mississippiensis*, new species.**

Male: Antennal process extraordinarily long and prominent; the distance from base above to tip being approximately half as long as the distance from the base above to the epistoma or twice the length of the process in *Somula decora* Macquart; yellow below, entirely black above, the black extending to the eyes, its margins straight. Antennæ black; second and third joints covered with microscopic, light colored pubescence; arista yellowish red near base, blackish apically. Face below antennal process only slightly concave and a little convex on lower part; descending perpendicularly considerably below the eyes; shining pale yellow, with a black median stripe extending from the epistoma to half the length of the antennal process on its lower surface. Cheeks shining black. Front black, almost destitute of the rather long, yellow pile that sparsely covers the occiput and the posterior orbits

below. On each side of the antennal process, with their bases against the eyes, are two triangular areas with microscopic, almost white pubescence.

Thorax a faintly shining black with five, dorsal, narrow, obscure metallic golden green stripes, merging into similarly colored area both at the anterior end and just before the scutellum, which gives to the black of the thorax a greenish cast. Scutellum shining; entirely metallic greenish black. Pile of medium length, rather thick and yellowish. Humeri opaque yellow, yellow pilose. Mesopleuræ black, with an oval yellow spot, yellow pilose. Squamæ yellow.

First segment of abdomen black, feebly shining. Second, third and fourth segments black, nearly opaque, each with a pair of opaque yellow spots and a shining, metallic, brassy band on posterior margin. Dorsum of abdomen short yellow pilose throughout. The posterior band of second segment is uniform in width, does not quite reach the lateral margin but turns up along the sides and reaches the anterior margin of the segment. The metallic part of the third segment is similar except that the posterior band is much wider in the middle and narrower on the sides. On the fourth it covers practically the whole of the segment and the black is limited on the posterior side to a narrow band encircling the spots. Fifth segment wholly shining metallic. Hypopygium feebly shining brownish or reddish. The spots of the abdomen are well separated, do not reach the lateral margin and are much smaller and more transverse than those of *Somula decora*. Those of the second segment are oblong and slightly narrowed on the inner end, and not quite twice as long as wide. Those of the third segment are not pyriform but are oblong, nearly three times as long as wide, slightly concave on the anterior and convex on the posterior side. The spots of the fourth segment are similar but somewhat smaller and a little more concave. A small yellow oblique triangle has its base on the anterior margin, touching lateral margin of the second segment, and a much smaller but similar pair of spots on the third segment. Venter shining black with yellow posterior margins to the segments, those of the first and fourth being widest. Legs light brownish yellow and covered with thick yellow pile. Hind femora along the inside with a number of short black bristles like hairs.

Last three joints of all the tarsi blackened; with blackish pile. Wings dark brown before the fourth longitudinal vein, becoming yellow near the base, hyaline posteriorly.

Female: Very similar to the male. The posterior metallic band of the second segment is nearly wanting, the yellow triangles in the anterior corners of the second are smaller, those of the third segment obsolete. The hind femora lack the black bristle like hairs on the inside. The black facial stripe extends narrowly to the tip of the antennal process; in one male paratype this is also true.

Length, including the antennal process: 17 mm.

Curiously enough, the first specimen of this magnificent species, a male, was taken at Agricultural College, Mississippi, May 6, 1920, dead but in perfect condition, from a cobweb! On March 3, 1921, a fragmentary but unmistakably identical specimen was taken from a cobweb in the same locality. Subsequently three specimens, two males and one female, have been taken by Mr. R. H. Smith on flowers of *Cratægus*, on April 2, 1922, at the college.

This species will be at once distinguished from *S. decora* Macquart, by its unusually long antennal process, its black facial stripe and the shape and configuration of the abdominal spots besides minor differences.

Types in the collection of the author.